

**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

**Application Number**

10/656,802

**Filing Date**

September 4, 2003

**First Named Inventor**

Erik Scher

**Group Art Unit**

1753

**Examiner Name**

Unassigned

**Total Number of Pages in This Submission****Attorney Docket Number**

40-001320US

**ENCLOSURES (check all that apply)**

- ☐ Fee Transmittal Form  
☐ Fee Attached  
☐ Amendment / Response  
☐ After Final  
☐ Affidavits/declaration(s)  
☐ Extension of Time Request  
☐ Express Abandonment Request  
☒ Information Disclosure Statement  
☐ Certified Copy of Priority Document(s)  
☐ Response to Missing Parts/ Incomplete Application  
☐ Response to Missing Parts under 37 CFR 1.52 or 1.53

- ☐ Assignment Papers (for an Application)  
☐ Drawing(s)  
☐ Licensing-related Papers  
☐ Petition Routing Slip (PTO/SB/69) and Accompanying Petition  
☐ Petition to Convert to a Provisional Application  
☐ Power of Attorney, Revocation Change of Correspondence Address  
☐ Terminal Disclaimer  
☐ Small Entity Statement  
☐ Request for Refund

- ☐ After Allowance Communication to Group  
☐ Appeal Communication to Board of Appeals and Interferences  
☐ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)  
☐ Proprietary Information  
☐ Status Letter  
☒ Additional Enclosure(s) (please identify below):

PTO form 1449, cited referenced and receipt acknowledgment postcard

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Please charge Deposit Account No. 50-0893 for any additional fees associated with this paper or during the pendency of this application, including any extensions of time for consideration of the documents enclosed.

Remarks

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**Firm  
or  
Individual name

Jonathan Alan Quine, Reg. No. 41,261, Quine Intellectual Property Law Group, P.C.

Signature

Date

January 26, 2004

**CERTIFICATE OF MAILING**

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Typed or printed name

Juliana Hermes

Signature

Date

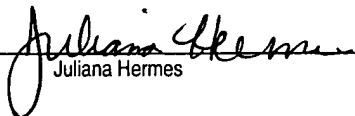
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QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.

By

  
Juliana Hermes

Attorney Docket No. 40-001320US  
Client Ref. No. 01-001320US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Erik Scher, et al.

Application No.: 10/656,802

Filed: September 4, 2003

For: NANOSTRUCTURE AND  
NANOCOMPOSITE BASED  
COMPOSITIONS AND  
PHOTOVOLTAIC DEVICES

Examiner: Unassigned

Art Unit: 1753

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR § 1.97 and  
§ 1.98

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

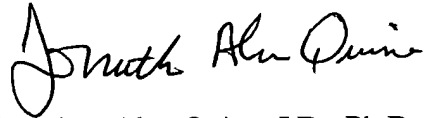
The references cited on attached form PTO-1449 are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no

representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action on the merits per 37 CFR 1.97(b)(3). However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 50-0893. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jonathan Alan Quine". The signature is fluid and cursive, with the first name "Jonathan" being more prominent.

Jonathan Alan Quine, J.D., Ph.D.  
Reg. No. 41,261

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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

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## Complete if Known

Application Number	10/656,802
Filing Date	September 4, 2003
First Named Inventor	Erik Scher
Group Art Unit	1753
Examiner Name	Unassigned
Attorney Docket Number	40-001320US
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## U.S. PATENT DOCUMENTS

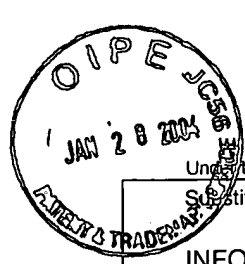
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
	1	5,505,928		Alivisatos et al.	04-19-1996	
	2	5,690,807		Clark Jr. et al.	11-27-1997	
	3	5,751,018		Alivisatos et al.	05-12-1998	
	4	5,897,945		Lieber et al.	04-27-1999	
	5	5,990,479		Weiss et al	11-23-1999	
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	7	6,036,774		Lieber et al	03-14-2000	
	8	6,048,616		Gallagher et al.	04-11-2000	
	9	6,136,156		El-Shall, et al.	10-24-2000	
	10	6,225,198		Alivisatos et al.	05-01-2001	
	11	6,239,355		Salafsky	05-29-2001	
	12	6,245,988		Gratzel et al.	06-12-2001	
	13	6,306,736		Alivisatos et al.	10-23-2001	
	14	6,413,489		Ying et al.	07-02-2002	
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	17	2002/0172820		Majumdar et al.	11-21-2002	
	18	10/405,914		Empedocles, et al.	04-01-2003	

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
	19	WO	94/04497		Ecole Polytechnique Federale de Lausanne (EPFL)	03-03-1994		
	20	WO	95/29924		Ecole	11-09-1995		

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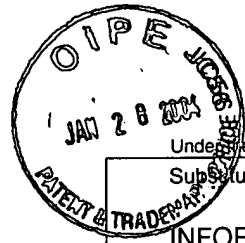
					Polytechnique Federale de Lausanne (EPFL)			
	21	WO	02/17362		President and Fellows of Harvard College	02-28-2002		
	22	WO	02/080280		The Regents of the University of California	10-10-2002		
	23	WO	03/085700		Nanosys, Inc.	10-16-2003		

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	24	Bjork et al. (2002) "One-dimensional steeplechase for electrons realized" <u>Nano Letters</u> 2, 86-90	
	25	Cao et al. (2000) "Growth and properties of semiconductor core/shell nanocrystals with InAs cores" <u>J. Am. Chem. Soc.</u> 122, 9692-9702	
	26	Cui et al. (2000) "Doping and electrical transport in silicon nanowires" <u>J. Phys. Chem. B</u> 104, 5213-5216	
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	28	Dabbousi et al. (1997) "(CdSe)ZnS core-shell quantum dots: Synthesis and characterization of a size series of highly luminescent nanocrystallites" <u>J. Phys. Chem. B</u> 101, 9463-9475	
	29	Duan et al. (2000) "General synthesis of compound semiconductor nanowires" <u>Adv. Mater.</u> 12, 298-302	
	30	Greenham et al., (1996) "Charge separation and transport in conjugated-polymer/semiconductor-nanocrystal composites studied by photoluminescence quenching and photoconductivity" <u>Phys. Rev. B</u> 54(24):17628-17637.	
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	33	Gudiksen et al. (2002) "Growth of nanowire superlattice structures for nanoscale photonics and electronics" <u>Nature</u> 415, 617-620	

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34	Huynh, <i>et al.</i> , (1999) "CdSe Nanocrystal Rods/Poly(3-hexylthiophene) Composite Photovoltaic Devices" <u>Adv. Materials</u> 11(11):923-927.
35	Huynh, <i>et al.</i> , (2002) "Hybrid Nanorod-Polymer Solar Cells" <u>Science</u> 295(5564):2426-2427
36	Jun <i>et al.</i> (2001) "Controlled synthesis of multi-armed CdS nanorod architectures using monosurfactant system" <u>J. Am. Chem. Soc.</u> 123, 5150-5151
37	Liu <i>et al.</i> (2001) "Sol-Gel Synthesis of Free-Standing Ferroelectric Lead Zirconate Titanate Nanoparticles" <u>J. Am. Chem. Soc.</u> 123, 4344
38	Manna <i>et al.</i> (2000) "Synthesis of Soluble and Processable Rod-, Arrow-, Teardrop-, and Tetrapod-Shaped CdSe Nanocrystals" <u>J. Am. Chem. Soc.</u> 122, 12700-12706
39	Manna <i>et al.</i> (2002) "Epitaxial growth and photochemical annealing of graded CdS/ZnS shells on colloidal CdSe nanorods" <u>J. Am. Chem. Soc.</u> 124, 7136-7145
40	Morales <i>et al.</i> (1998) "A laser ablation method for the synthesis of crystalline semiconductor nanowires" <u>Science</u> 279, 208-211
41	Peng <i>et al.</i> (1997) "Epitaxial growth of highly luminescent CdSe/CdS core/shell nanocrystals with photostability and electronic accessibility" <u>J. Am. Chem. Soc.</u> 119, 7019-7029
42	Peng <i>et al.</i> (2000) "Shape control of CdSe nanocrystals" <u>Nature</u> 404, 59-61
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44	Urban <i>et al.</i> (2002) "Synthesis of single-crystalline perovskite nanowires composed of barium titanate and strontium titanate" <u>J. Am. Chem. Soc.</u> , 124, 1186
45	Wu <i>et al.</i> (2002) "Block-by-block growth of single-crystalline Si/SiGe superlattice nanowires" <u>Nano Letters</u> 2, 83-86
46	Yun <i>et al.</i> (2002) "Ferroelectric Properties of Individual Barium Titanate Nanowires Investigated by Scanned Probe Microscopy" <u>Nanoletters</u> 2, 447.

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